DISCUSSION OF THE AMENDMENT

The specification has been amended by inserting the parentage of the present application; by inserting description related to new Fig. 19; by making a correction at page 23 as noted by the Examiner; and by shortening the Abstract.

Claims 3-7 have each been amended to depend on Claim 1.

No new matter is believed to have been added by the above amendment. Claims 1-10 remain pending in the application. Claims 1-7 are active; Claims 8-10 stand withdrawn from consideration.

REMARKS

The rejection of Claims 1-7 under 35 U.S.C. § 103(a) as unpatentable over US 6,168,442 (Naoi), is respectfully traversed.

As recited in Claim 1, the elected invention is drawn to an anisotropically conductive connector suitably used for, in a wafer inspection apparatus for performing electrical inspection of a great number of integrated circuits formed on a wafer, which comprises: a circuit board for inspection having a great number of inspection electrodes on a front surface thereof; and a probe card having a circuit board for connection, on the back surface of which a plurality of terminal electrodes have been formed in accordance with a pattern corresponding to a pattern of the inspection electrodes of the circuit board for inspection, and a contact member, which is provided on the front surface of the circuit board for connection, and on which a great number of contacts brought into contact with respective electrodes to be inspected of the integrated circuits on the wafer, which is an object of inspection, have been arranged, and arranged in such a manner that the terminal electrodes of the circuit board for connection are opposed to their corresponding inspection electrodes of the circuit board for inspection, electrically connecting the inspection electrodes to the respective terminal electrodes by being arranged between the circuit board for inspection and the circuit board for connection in the probe card, and the anisotropically conductive connector comprises an elastic anisotropically conductive film composed of a plurality of conductive parts for connection each extending in a thickness-wise direction of the film and arranged in a state separated from each other along a plane direction of the film and an insulating part formed among these conductive parts for connection, and a frame plate for supporting the elastic anisotropically conductive film, wherein the frame plate is formed of a metallic material having a **coefficient of linear thermal expansion of 3×10^{-6} to 2×10^{-5} K^{-1}**, the conductive parts for connection in the elastic anisotropically conductive film are obtained by filling

conductive particles having a number average particle diameter of 20 to 80 μm and exhibiting magnetism in an elastic polymeric substance at a high density, the conductive particles have, on a surface of which, a coating layer composed of a noble metal and having a thickness of at least 20 nm, each of the conductive parts for connection has a **durometer hardness of 10 to 35**, and an electric resistance between conductive parts for connection adjoining each other is at least 10 MΩ.

(Emphasis added.)

The specification herein contains comparative data demonstrating the significance of the above-emphasized limitations of the claims. Examples 1-4 are according to the present invention; Comparative Examples 1-3 are not. In Comparative Example 1, the coefficient of linear thermal expansion is 6×10^{-5} K^{-1}, or greater than the presently-recited maximum of 2×10^{-5} K^{-1}. In Comparative Example 2, the number average particle diameter of the conductive particles is 120 μm, or above the presently-recited maximum of 80 μm. In Comparative Example 3, the durometer hardness is 63, or above the presently-recited maximum of 35. The characteristics of the examples and comparative examples are shown in Table 1 at page 70 of the specification. The examples and comparative examples were subjected to various tests, as described in the specification beginning at page 71, line 1. The results are shown in Tables 2 and 3, at pages 76 and 82, respectively. Applicants describe the results in the specification beginning at page 83, line 1, as follows:

> As apparent from Tables 2 and 3, it is understood that according to the anisotropically conductive connectors according to Examples 1 to 4, a good electrically connected state is achieved, the good electrically connected state is stably retained even when the anisotropically conductive connectors are used for a long period of time under a high-temperature environment.
>
> In the anisotropically conductive connector according to Comparative Example 1 on the other hand, the frame plate was greatly deformed by shrinkage on curing of the silicone rubber in the step of forming the elastic anisotropically conductive

> film because the frame plate supporting the elastic anisotropically conductive film was composed of polyethylene terephthalate. It was thus difficult to conduct the positioning and fixing of the electrodes of the electrode plates for test.
>
> In the anisotropically conductive connector according to Comparative Example 2, variations in the conductivity in thickness-wise direction among the conductive parts for connection were great, and the electric resistance values of the conductive parts for connection were raised when the anisotropically conductive connector was used for a long period of time because the particle diameter of the conductive particles contained in the conductive parts for connection was great, so that stable electrical connection was not retained.
>
> In the anisotropically conductive connector according to Comparative Example 3, it was difficult to pressurize the conductive parts for connection of the anisotropically conductive connector so as to give a distortion factor of 20% without deforming the electrode plate for test by the pressurization because the durometer hardness of the conductive parts for connection is high. Such an anisotropically conductive connector is difficult to achieve electrical connection to a wafer without deforming or breaking the circuit board for inspection and the circuit board for connection when it is used in a wafer inspection apparatus, and thus involves a problem upon practical use.

The above-discussed results could not have been predicted by the applied prior art.

Comparative Examples 2 and 3 are particularly pertinent with regard to Naoi. Naoi's disclosure with regard to their conductive material is considerably broader than that required by the present claims, and in its most preferred embodiment, the shape of Naoi's conductive material has a short diameter of from 10 to 200 μm, and a long diameter distribution of 1.1 to 4 (column 5, line 57 through column 6, line 15). The 120 μm diameter of Comparative Example 2 herein is squarely within Naoi's range. Moreover, with regard to Comparative Example 3 herein, Naoi discloses nothing with regard to durometer hardness.

Nor is the Examiner correct that because the respective materials of the present invention and Naoi are the same that their respective properties are the same, since the above-

discussed comparative examples use materials within the scope of the materials disclosed in Naoi.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The objection to Claims 5-7 is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that the objection be withdrawn.

The objections to the disclosure and to the Abstract of the Disclosure are now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that the objections be withdrawn.

The objection to the drawings is now moot in view of the submission of a new drawing illustrating the coating layer covering the conductive particles. Indeed, in telephone conversation between the Examiner and undersigned counsel on November 13, 2007, the Examiner agreed that a new figure, such as new Fig. 19, with supporting description, would be acceptable. Accordingly, it is respectfully requested that this objection be withdrawn.

The requirement of a new oath or declaration is respectfully traversed. 37 C.F.R. § 1.63(c)(2) permits foreign application data for which priority is claimed to be listed in an Application Data Sheet (ADS) in lieu of including this information in the oath or declaration. Since such an ADS was filed on December 7, 2005 in this application, it is respectfully requested that the requirement of a new oath or declaration be withdrawn.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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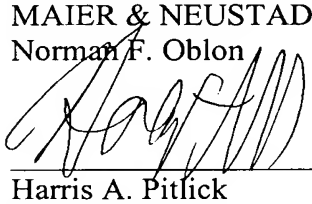

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